

STS- 121 CoFR ENDORSEMENT

ELEMENT	SERIAL NUMBER	PAYLOAD
ORBITER	OV-103 (32)	ISS ULF 1.1
ET	ET-119	
RSRM	RSRM-93	
SSME	2045, 2051, 2056	
SRB	BI-126	

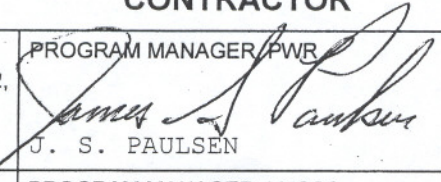
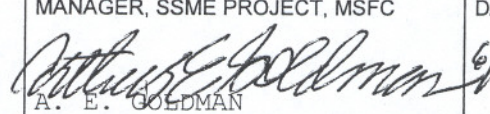
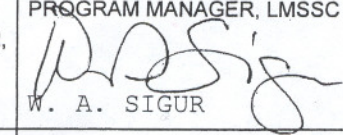

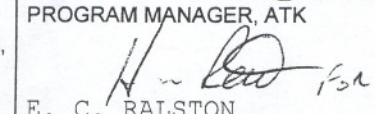
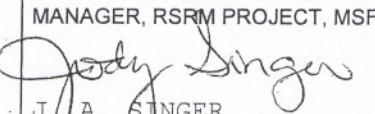
Projects having exceptions to this CoFR document are as follows (see Exception Log for details):

001 - EVA
 002 - EVA
 003 - Flight Operations & Integration
 004 - Flight Operations & Integration
 005 - SFOC Program Integration
 006 - SFOC Program Integration
 007 - SFOC Program Integration
 008 - SFOC Program Integration
 009 - SFOC Program Integration
 010 - SFOC Program Integration
 011 - SFOC
 012 - External Tank
 013 - External Tank
 014 - Solid Rocket Booster
 015 - RSRM
 016 - SSME
 017 - SSME
 018 - SSME
 019 - Orbiter
 020 - Orbiter
 021 - Orbiter/GFE
 022 - Shuttle Processing
 023 - System Engineering & Integration
 024 - System Engineering & Integration
 025 - System Engineering & Integration

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The Flight Preparation Process Plans documented in NSTS 08117, Requirements and Procedures for Certification of Flight Readiness, have been satisfied. Required products and other responsibilities for each project (NSTS 08117, Section 8) have been or will be produced or completed.

- a. Certified flight hardware elements have been delivered to the SFOC at the Kennedy Space Center.
- b. Required hardware element processing specifications and requirements have been delivered to the SFOC.
- c. All identified anomalous events that occurred after delivery of hardware for launch processing/ assembly/testing have been resolved.
- d. For anomalous conditions detected during manufacturing, testing, or post-mission tear down and analysis, notification to the Space Shuttle Program has been made, and corrective action, if any, identified.
- e. The as-built flight element configuration satisfies the released requirements and engineering, based on data compiled and reviewed by SFOC.
- f. For the Space Shuttle Main Engine Project: Certified main engine controller software has been delivered for this mission.

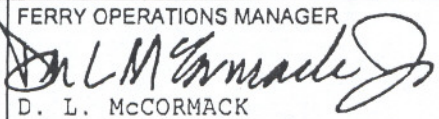
CONTRACTOR			NASA	
SSME (8.5.3.1, 8.5.3.2, Apx. C)	PROGRAM MANAGER, PWR  J. S. PAULSEN	DATE 6/17/06	MANAGER, SSME PROJECT, MSFC  A. E. GOLDMAN	DATE 6/17/06
ET (8.5.4.1, 8.5.4.2, Apx. D)	PROGRAM MANAGER, LMSSC  W. A. SIGUR	DATE 6/17/06	MANAGER, ET PROJECT, MSFC  J. S. CHAPMAN	DATE 6/17/06
RSRM (8.5.5.1, 8.5.5.2, Apx. E)	PROGRAM MANAGER, ATK  E. C. RALSTON	DATE 6/17/06	MANAGER, RSRM PROJECT, MSFC  J. A. SINGER	DATE 6/17/06

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The Flight Preparation Process Plans documented in NSTS 08117, Requirements and Procedures for Certification of Flight Readiness, have been satisfied. Required products and other responsibilities for each organization (NSTS 08117, Section 8) have been or will be produced or completed.

- a. For Payload Processing: Flight and ground requirements, payload logistics, and configuration requirements provided by the flight projects, have been maintained, performed, or are planned to be performed per approved TOPs.
- b. For EVA project: Audit, insight, and surveillance of SFOC activities have been completed or are planned for completion, and all discrepancies have been resolved. Oversight functions have been conducted in conjunction with Hamilton Sundstrand.

NASA

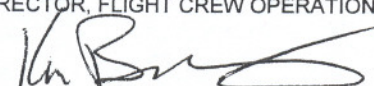
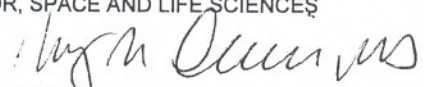
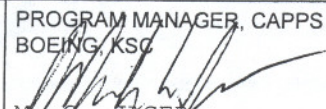
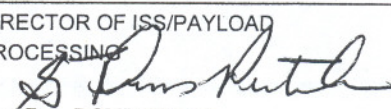
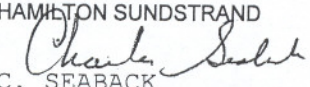

FLIGHT CREW OPERATIONS (8.5.10.1, 8.5.10.2, Apx. K)	DIRECTOR, FLIGHT CREW OPERATIONS K. D. BOWERSOX	DATE
FERRY OPERATIONS (8.5.15.1, 8.5.15.2, Apx. P)	FERRY OPERATIONS MANAGER  D. L. MCCORMACK	DATE 6/16/06
SPACE AND LIFE SCIENCES (8.5.14.1, 8.5.14.2, Apx. O)	DIRECTOR, SPACE AND LIFE SCIENCES J. R. DAVIS	DATE
	CONTRACTOR	NASA
PAYLOAD PROCESSING (8.5.9.1, 8.5.9.2, Apx. J)	PROGRAM MANAGER, CAPPS BOEING, KSC M. G. JAGER	DATE DIRECTOR OF ISS/PAYLOAD PROCESSING R. R. ROMANELLA
EVA (8.5.2.1, 8.5.2.2, Apx. B)	PROGRAM MANAGER, HAMILTON SUNDSTRAND C. SEABACK	DATE MANAGER, EVA OFFICE S. C. DOERING

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The Flight Preparation Process Plans documented in NSTS 08117, Requirements and Procedures for Certification of Flight Readiness, have been satisfied. Required products and other responsibilities for each organization (NSTS 08117, Section 8) have been or will be produced or completed.

- a. For Payload Processing: Flight and ground requirements, payload logistics, and configuration requirements provided by the flight projects, have been maintained, performed, or are planned to be performed per approved TOPs.
- b. For EVA project: Audit, insight, and surveillance of SFOC activities have been completed or are planned for completion, and all discrepancies have been resolved. Oversight functions have been conducted in conjunction with Hamilton Sundstrand.

NASA

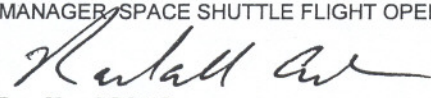

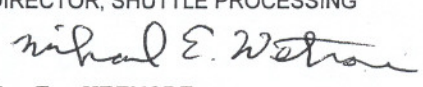

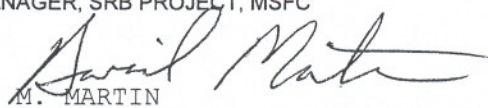
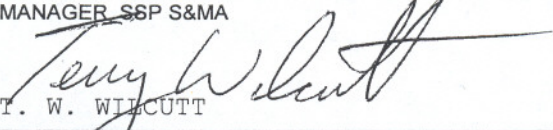

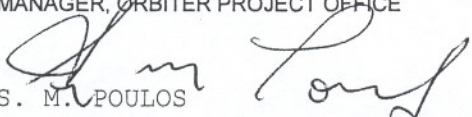
FLIGHT CREW OPERATIONS (8.5.10.1, 8.5.10.2, Apx. K)	DIRECTOR, FLIGHT CREW OPERATIONS  K. D. BOWERSOX	DATE 6/17/06
FERRY OPERATIONS (8.5.15.1, 8.5.15.2, Apx. P)	FERRY OPERATIONS MANAGER D. L. McCORMACK	DATE
SPACE AND LIFE SCIENCES (8.5.14.1, 8.5.14.2, Apx. O)	DIRECTOR, SPACE AND LIFE SCIENCES  J. R. DAVIS	DATE 6/17/06
	CONTRACTOR	NASA
PAYLOAD PROCESSING (8.5.9.1, 8.5.9.2, Apx. J)	PROGRAM MANAGER, CAPPS BOEING/KSC  M. G. JAGER	DATE 6/17/06
		DIRECTOR OF ISS/PAYLOAD PROCESSING  R. ROMANELLA
EVA (8.5.2.1, 8.5.2.2, Apx. B)	PROGRAM MANAGER, HAMILTON SUNDSTRAND  C. SEABACK	DATE 6/17/06
		MANAGER, EVA OFFICE  S. C. DOERING

STS- 121 CoFR ENDORSEMENT

The Flight Preparation Process Plans documented in NSTS 08117, Requirements and Procedures for Certification of Flight Readiness, have been satisfied. Required products and other responsibilities (shared or independent) for each organization (NSTS 08117, Section 8) have been or will be produced or completed.

- a. The following NASA organizations have completed or plan to complete audit, insight, and surveillance of contractor activities, and have resolved all discrepancies.

NASA


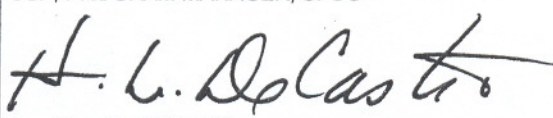
FLIGHT OPERATIONS AND INTEGRATION (8.5.13.1, 8.5.13.2, Apx. N)	MANAGER, SPACE SHUTTLE FLIGHT OPERATIONS AND INTEGRATION  R. W. ADAMS	DATE 6/17/2006
KSC INTEGRATION (8.5.11.1, 8.5.11.2, Apx. L)	MANAGER, SPACE SHUTTLE KSC INTEGRATION  G. N. KATNIK	DATE
SHUTTLE PROCESSING (8.5.8.1, 8.5.8.2, Apx. H)	DIRECTOR, SHUTTLE PROCESSING  M. E. WETMORE	DATE 6/17/06
MISSION OPERATIONS (8.5.7.1, 8.5.7.2, Apx. G)	DIRECTOR, MISSION OPERATIONS  G. A. FLYNT	DATE 6-17-06
SRB (8.5.6.1, 8.5.6.2, Apx. F)	MANAGER, SRB PROJECT, MSFC  D. M. MARTIN	DATE 6-17-06
SSP S&MA (8.5.16.1, 8.5.16.2, Apx. Q)	MANAGER, SSP S&MA  T. W. WILCUTT	DATE 6-17-06
SYSTEMS ENGINEERING AND INTEGRATION (6.3, 8.5.12.1, 8.5.12.2, Apx. M)	MANAGER, SPACE SHUTTLE SYSTEMS ENGINEERING AND INTEGRATION  K. B. DOERING	DATE 6/17/06
ORBITER PROJECT (8.5.1.1, 8.5.1.2, Apx. A)	MANAGER, ORBITER PROJECT OFFICE  S. M. POULOS	DATE 6/17/06

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The Space Shuttle Flight Preparation Process Plans (shared or independent) documented in NSTS 08117, Requirements and Procedures for Certification of Flight Readiness, have been satisfied. Required products and other responsibilities (shared or independent) for the SFOC (NSTS 08117, Section 8) have been or will be produced or completed.

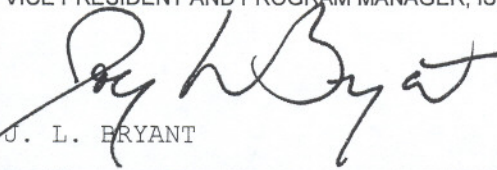
- a. All anomalous conditions have been identified and resolved with the NASA.
- b. The SSV has been processed in accordance with requirements and policies baselined by the SSP.

UNITED SPACE ALLIANCE

SFOC SQ&MA CONCURRENCE	VICE PRESIDENT, SAFETY, QUALITY AND MISSION ASSURANCE, SFOC  C. L. LOVELL	DATE 6/17/06
SFOC (8.5.17.1, 8.5.17.2, Apx. R)	SSP, PROGRAM MANAGER, SFOC  H. L. DeCASTRO	DATE 6/17/06

Boeing endorses that the requirements for CoFR documented in SSP 50108 and the Boeing Flight CoFR Implementation Plan have been satisfied in accordance with the Boeing specific responsibilities for this flight. Any issues that have arisen since the Stage Operations Readiness Review (SORR) have been resolved or have been presented at the Flight Readiness Review. This certification is subject to clause H.43 of NAS 15-10000 (for ISS Missions).

BOEING

ISS PRIME CONCURRENCE	VICE PRESIDENT AND PROGRAM MANAGER, ISS, BOEING  J. L. BRYANT	DATE 17-Jun-06
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NASA SSP READINESS

The preparation of all Space Shuttle Program and Project organizations for this mission has been reviewed. All required processes, products, and responsibilities are complete or will be completed prior to launch. Deviations, exceptions or waivers have been reviewed and will be dispositioned by the MMT L-2 Day Review for this mission. The Space Shuttle Program is ready to proceed with the conduct of this mission.


L. E. CAIN

MANAGER, LAUNCH INTEGRATION

6/17/2006
DATE


R. M. LIGHTFOOT

DEPUTY MANAGER, SPACE SHUTTLE
PROGRAM, MSFC

6/17/06
DATE


J. P. SHANNON

DEPUTY MANAGER, SPACE SHUTTLE
PROGRAM, JSC

6/17/06
DATE


N. W. HALE

MANAGER, SPACE SHUTTLE PROGRAM

6/17/06
DATE

NASA ISS PROGRAM READINESS

All necessary activities required to support the flight, stage and increment have been accomplished or are planned. All deviations, waivers, and exceptions have been reviewed and satisfactorily dispositioned. The International Space Station Program is ready to proceed with launch and on-orbit operations. Any issues that have arisen since the SORR have been resolved or have been presented at the Flight Readiness Review (for ISS Missions).


M. T. SUFFREDINI

MANAGER, INTERNATIONAL SPACE
STATION PROGRAM

6/17/06
DATE

CONCURRENCE

I concur that the Space Shuttle Program is ready to proceed with this mission.


W. C. HILL

ASSISTANT ASSOCIATE ADMINISTRATOR,
SPACE SHUTTLE

6.17.06
DATE

STS- 121 CoFR ENDORSEMENT

CONCURRENCE

I concur that the International Space Station Program (for ISS Missions) is ready to proceed with this mission.

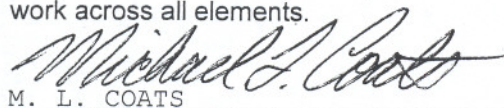

M. L. UHRAN

ASSISTANT ASSOCIATE ADMINISTRATOR,
INTERNATIONAL SPACE STATION

6/19/06
DATE

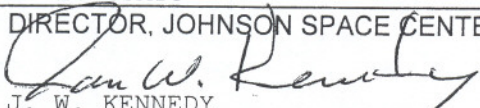
I have conducted a Center Flight Readiness Review for this mission and have determined that the technical products, processes, policies, and technical requirement variances for the Space Shuttle and International Space Station (for ISS missions) systems within the assigned technical responsibility and cognizance of my Center have been satisfactorily dispositioned, and that all associated residual technical risks have been appropriately characterized and accepted by the Programs.

As a member of the FRR Board, and consistent with my responsibility for independent technical authority, and safety and mission assurance, I certify the readiness of the Space Shuttle and International Space Station (for ISS missions) Programs to execute this mission pending satisfactory completion of planned work across all elements.


M. L. COATS

DIRECTOR, JOHNSON SPACE CENTER

6/17/06
DATE


J. W. KENNEDY

DIRECTOR, KENNEDY SPACE CENTER

6/17/06
DATE


D. A. KING

DIRECTOR, MARSHALL SPACE FLIGHT CENTER

6-17-06
DATE


R. J. GILBRECH

DIRECTOR, STENNIS SPACE CENTER

6-17-06
DATE

I have reviewed the Space Shuttle and International Space Station (for ISS missions) crew health and life support systems and concur with the readiness to proceed with this mission.


R. S. WILLIAMS

CHIEF HEALTH AND MEDICAL OFFICER

6/17/06
DATE

I have conducted a review for this mission and have determined that the technical products, processes, policies, and technical requirement variances for the Space Shuttle and International Space Station (for ISS missions) systems have been satisfactorily dispositioned, and that all associated residual technical risks have been appropriately characterized and accepted by Engineering and the Programs. ~~I concur with proceeding with this mission.~~ I REMAIN NO GO BASED UPON POTENTIAL LOSS OF VEHICLE HOWEVER FOR THIS MISSION I HAVE NO INTENTION TO APPEAL THE DECISION BASED UPON ISS CAPABILITY TO PROVIDE CSCS.

C. J. SCOLESE 

NASA CHIEF ENGINEER

17 JUNE 2006
DATE

STS- 121 CoFR ENDORSEMENT

CONCURRENCE

As a member of the FRR Board, I concur that, pending completion of planned work, the Prime Mission is ready to execute this mission (for non-ISS missions).

N/A

ASSOCIATE ADMINISTRATOR FOR
PRIME MISSION

DATE

I have reviewed with the Space Shuttle Program and Center S&MA organizations the status of preparations for this mission including the Launch On Need (LON) rescue mission as briefed (if required, a LON FRR will be conducted and flight certification will be signed), and the readiness of the International Space Station for launch and on-orbit operations (for ISS missions), including the uncertified Contingency Shuttle Crew Support (CSCS) operation, as briefed. ~~I concur with proceeding with this mission.~~ **I AM NO GO BASED ON LOSS OF VEHICLE RISK (WE FROST RAMPS). BASED ON APPEAL TO ADMINISTRATOR I HAVE NO INTENTION TO APPEAL HIS RISK ACCEPTANCE AND CONCUR WITH PROCEEDING WITH MISSION**

B. D. O'CONNOR

CHIEF OF SAFETY AND MISSION ASSURANCE

DATE

17 JUNE 06

APPROVAL

The FRR Board has conducted a comprehensive assessment of the readiness of all flight and ground systems and supporting personnel. For ISS missions, the FRR Board has also conducted a comprehensive assessment of the readiness of the Launch Package/Cargo Element (LP/CE), ground hardware/software support facilities and personnel to support the flight, stage and increment including the readiness of the on-orbit stage to accept the LP/CE and return items. The Certificate of Flight Readiness has been endorsed by each program element. I have concluded, with the concurrence of the FRR Board, that pending completion of planned work, the Space Shuttle Program is ready to execute this mission, including the LON rescue mission as briefed (if required, an LON FRR will be conducted and flight certification will be signed), and the International Space Station Program is ready for launch and on-orbit operations (for ISS missions) including the uncertified CSCS operation, as briefed.

W. H. GERSTENMAIER

ASSOCIATE ADMINISTRATOR, SPACE OPERATIONS
MISSION DIRECTORATE (CHAIR, FRR BOARD)

DATE

17 June 06